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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,946

12/12/2006

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EXAMINER

PHILIPPE, GIMS S

ART UNIT

PAPER NUMBER

2485

NOTIFICATION DATE

DELIVERY MODE

09/28/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/594,946	Applicant(s) FUJITA ET AL.	
	Examiner GIMS PHILIPPE	Art Unit 2485	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 3-11 and 13-16 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 3-11 and 13-16 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/29/06, 05/31/07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This is a first office action in response to application no. 10/594,946 filed on December 12, 2006 in which claims 3-11 and 13-16 are presented for examination.

Claim Objections

1. Claims 11-12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 11-12 depend from canceled claim 1. Claim 1 was canceled by a preliminary amendment.

Claim Rejections - 35 USC § 112 6th Paragraph

2. The following claim elements are means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph.

- a) "image dividing means"
- b) "analyzing means";
- c) "road view analyzing";
- d) "scene analyzing means";
- e) "background analyzing means";

The applicant should note that elements a) to e) are claimed in claims 3-16. In addition, claims 13-16 call for several other means plus function limitations.

3. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. “analyzing means”; “road view analyzing means”; “scene analyzing means”; “background analyzing means”.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Takenaga et al. (US Patent no. 6191704).

Regarding claims 13 and 16, Takenaga discloses a road view analysis method and apparatus having a camera mounted on a vehicle to photograph a view in front of the vehicle, for analyzing a road view indicated by an image of the view in front of the vehicle photographed by the camera (See col. 4, lines 14-33), the road view analyzing apparatus comprising image dividing means for dividing the image of the view in front of the vehicle photographed by the camera into a plurality of areas (See col. 10, lines 50-57), and analyzing means for separately analyzing content of the image in each of the plurality of areas (See col. 6, lines 41-47), wherein the image dividing means applies white line recognition to the image of the view in front of the vehicle and sets an area up to a white line in the outermost part by the white line recognition as a road area (See col. 4, lines 34-38 and col. 6, lines 62-65).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raboisson et al. (US Patent no. 5,706,355).

Raboisson discloses a road view analyzing apparatus having a camera mounted on a vehicle to a photograph a view in a front of the vehicle, for analyzing a road view indicating by an image of the view in front of the vehicle photographed by the camera (See Abstract, fig. 2, item 3), the road view analyzing apparatus comprising image dividing means for dividing the image of the view in front of the vehicle photographed into a plurality of areas with lines (See original image of fig. 2, and col. 5, lines 59-65), means for analyzing means for separately analyzing content of the image in each of the plurality of areas, wherein the analyzing means includes: road view analyzing means for applying road analysis processing to an image in a lower area of the plurality of areas (See col. 5, lines 66-67, col. 6, lines 1-8 and lines 43-56), scene analyzing means for applying scene analysis processing to an image in each of the left and right areas of the plurality of areas (See fig. 2 with original image divided into top/bottom and left/right where the scene is the image of the environment taken by the CCD camera as detailed

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in col. 4, lines 18-30), background analyzing means for applying background analysis processing to an image in an upper area of the plurality of areas (See fig. 2 with original image, and background analyzing means detailed in col. 3, lines 51-55 and col. 4, lines 3-14).

It is noted that Raboisson does not particularly divides the image into areas with diagonal lines as claimed.

However, Raboisson clearly divides the images into 4 areas with top/bottom and left/right areas were such segmentation is used for the same purpose as claimed by the applicant. To the examiner, one skilled in the art at the time of the invention would recognize the advantage of dividing the image into areas, and would be motivated to modify Raboisson's image segmentation by dividing the image into a plurality of areas with diagonal lines for the same purpose of identifying possible location of potential obstacles on the road as taught by Raboisson (See col. 7, lines 60-67 and col. 8, lines 1-8).

8. Claims 4-9 and 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 6th paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Nakajima et al. (US Patent no. 5521633) teaches motor vehicle obstacle monitoring system using optical flow processing.

Takeda (US Patent no. 6985075) teaches obstacle detection apparatus and method.

Tseng (US Patent no. 6765480) teaches monocular computer vision aided road vehicle driving for safety.

Zhu et al. (US Patent Application Publication no. 2004/0234136 A1) teaches system and method for vehicle detection and tracking.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GIMS PHILIPPE whose telephone number is (571)272-7336. The examiner can normally be reached on M-F (10:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gims S Philippe
Primary Examiner
Art Unit 2485

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